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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,743	02/07/2002	Ronnie M. Harrison	3758.2US (97-0153.1)	4046

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 08/07/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,743

Applicant(s)

HARRISON ET AL.

Examiner

Donghai D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 12-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7-11 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) 1-15 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to a method of fabricating an integrated circuit package, classified in class 29, subclass 830.
 - II. Claims 12-15, drawn to a method of forming a lead frame, classified in class 29, subclass 827.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions Group I and Group II are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination does not require the general accurate shape of each conductor of the plurality having a different length from one another. The subcombination has separate utility such as making a lead frame.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

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5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Bradley B. Jensen on August 4, 2003 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-11.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-15 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

8. The abstract of the disclosure is objected to because the claimed inventions direct to method of fabrication an integrated circuit package. Correction is required. See MPEP § 608.01(b).

9. The disclosure is objected to because of the following informalities: the phrase "1998, pending" (page 2, line 5) should be --1998, now is US Patent No. 6,362,426--.

Appropriate correction is required.

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10. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --METHOD OF FABRICATING AN INTEGRATED CIRCUIT PACKAGE--.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-3 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 4,974,053 to Kinoshita et al.

Regarding to claim 1, Kinoshita et al. disclose a method of fabricating an integrated circuit package, the method comprising: providing a semiconductor die (1) having a plurality of conductive pads (6a-6j; etc.); forming at least two conductors (7), each conductor of the at least two conductors having a first end and a second end and a generally arcuate-shaped portion between the first and second ends, at least a portion of each generally arcuate-shaped portion exhibiting a constant radius; configuring and positioning the at least two conductors such that line spacing between the generally arcuate-shaped portion of each of the at least two conductors is constant (Fig. 9B); electrically coupling the first ends of each of the at least two conductors with at least one of the plurality of conductive pads (by wire 8 in fig. 9B); and encapsulating the

semiconductor die and at least a portion of the at least two conductors with an insulating material (Col. 7, line 50 to Col. 8, line 4).

Regarding claims 2-3 and 7-10, Fig. 9B shows a first conductor to exhibit a first arc length through its generally arcuate shaped portion and forming a second conductor to exhibit a second arc length through its generally arcuate shaped portion wherein the first arc length is different than the second arc length and each generally arcuate shaped portion of each of the at least two conductors to exhibit a different arc length than any other generally arcuate-shaped portion of any other conductor of the at least two conductors. It also shows at least one conductor of the at least two conductors such that the generally arcuate-shaped portion is a substantial portion of the at least one conductor and exhibits a constant radius throughout an entire arc length thereof. Yet it shows the at least two conductors such that line spacing between at least two conductors is constant from the respective first ends to the respective second ends of the at least two conductors and the first and second ends of each of the at least two conductors to be positioned at orientations of substantially 90° relative to each other.

13. Claims 1-3 and 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,200,362 to Lin et al.

Regarding to claim 1, Line et al. disclose a method of fabricating an integrated circuit package, the method comprising: providing a semiconductor die (15) having a plurality of conductive pads (inherence); forming at least two conductors (13), each conductor of the at least two conductors having a first end and a second end and a generally arcuate-shaped portion between the first and second ends, at least a portion of each generally arcuate-shaped portion

exhibiting a constant radius; configuring and positioning the at least two conductors such that line spacing between the generally arcuate-shaped portion of each of the at least two conductors is constant (Fig. 8); electrically coupling the first ends (16) of each of the at least two conductors with at least one of the plurality of conductive pads (by wire 18); and encapsulating the semiconductor die and at least a portion of the at least two conductors with an insulating material (20).

Fig. 8 shows all the limitation regarding claims 2-3 and 7-11.

Allowable Subject Matter

14. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (703) 305-7859. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (703) 308-1789. The fax phone numbers for the

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organization where this application or proceeding is assigned are (703) 305-7307 for regular communications and (703) 305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

DN
August 4, 2003

PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700